Office of Insurance Services

TRENDS

Volume 9, Issue 3 Fall 1998

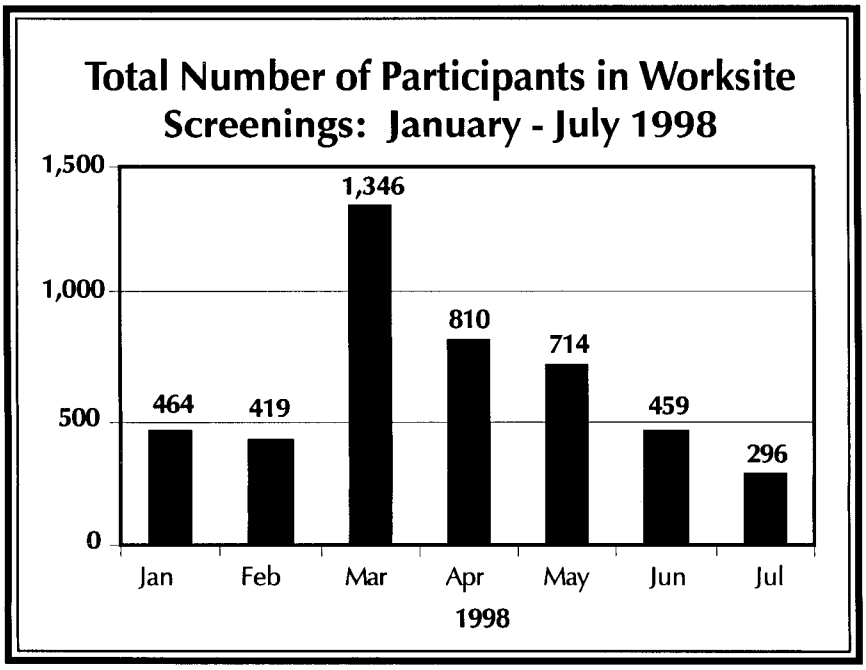
State Health Plan Preventive Worksite Screenings prove successful

With the dual goals of early detection and prevention of disease, the Office of Insurance Services' Prevention Partners began offering a worksite health screening benefit in 1998 for active State Health Plan subscribers.

With just a $10 copayment, eligible State Health Plan members receive a comprehensive health screening. Components of the screening include: a personal health risk appraisal, lipid profile, chemistry profile and hemogram. Additionally, participants have their blood pressure, height and weight measured.

In addition to worksite screenings, regional screenings are also available. The regional screenings are scheduled once a month, moving throughout the state to reach SHP subscribers who work in offices with fewer than 50 eligible employees.

Once the screening results are complete, participating providers send confidential individual results to program participants. Copies of management reports, which summarize worksite results, are then provided to the worksite screening coordinator and to the Prevention Partners' offices. These aggregate results do not include names or social security numbers, thereby protecting the confidentiality of the participants.



According to the program's seven-month report, 115 worksite screenings were conducted between January and July 1998. The total number of individuals screened during this time period was reported at 4,508.

Screening Components

The first component of the health screenings, the **lipid profile**, measures total cholesterol, low

Continued on Page 2

Inside TRENDS...

Screenings

Continued from Page 1

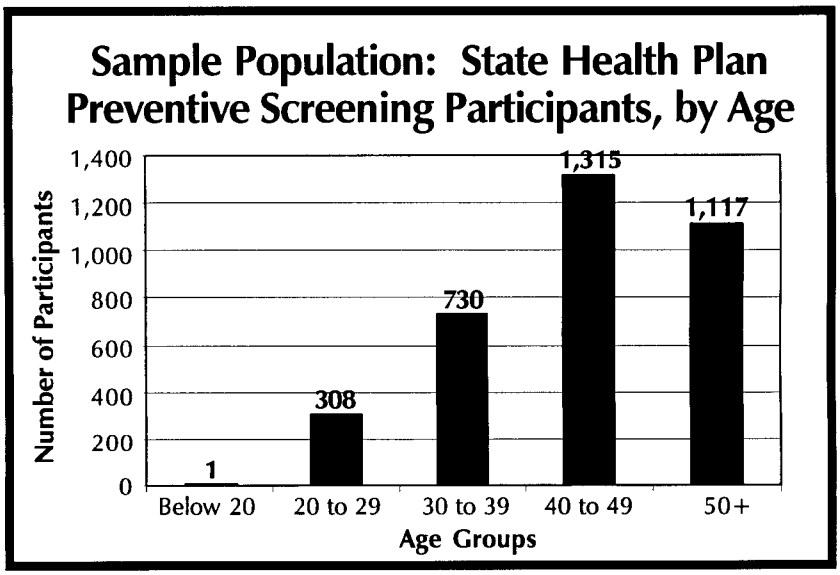
density lipoproteins (LDL), high density lipoproteins (HDL) and triglycerides.

LDL, or "bad cholesterol," can clog arteries and prevent oxygen-rich blood from flowing to the heart. HDL, or "good cholesterol," helps move LDL away from arteries and prevents buildup of fat on arterial walls.

Triglycerides contribute to the hardening of arteries and heart disease. Elevated levels of triglycerides can also indicate diabetes.

The second component, the **chemistry profile**, measures Blood Urea Nitrogen (BUN) and creatinine levels, which help assess kidney function. The chemistry profile also measures glucose levels (blood sugar) and electrolyte levels (calcium, magnesium, potassium and zinc).

The **hemogram**, which is the final component, measures the red and white blood cell count. (White blood cells are the body's primary defense against illness. Red blood cells carry oxygen from the lungs to organs and tissues.) The hemogram also measures hemoglobin (which is involved in transporting oxygen from the lungs to the organs and tissues) and hematocrit (the amount of red blood cells per total volume of blood).



Screening Results

Looking at the aggregate screening results for four out of the 18 providers across the state (Carolina Hospital System, Anderson Area Medical Center, Baptist Medical Center and North Greenville Fitness), there were a total of 3,471 people--over three-fourths of the entire screened population. Within the sample studied, 76.2 percent was female and 23.8 percent was male.

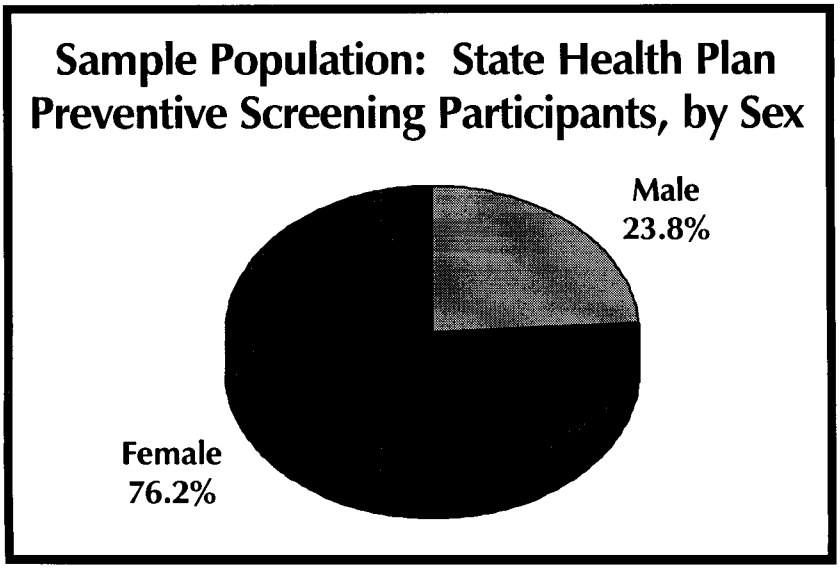
The average age for screening participants was 45.6 years. The largest age group participating was the 40 to 49 group, with 37.9 percent--followed closely by the 50 and over age group, with 32.2 percent.

Examining some of the screening components, 26.5 percent of the participants were reported with clinical blood pressure over 140/90--which is the upper limit for a healthy person. Repeated readings equal to or greater than 140/90 are an indicator of high blood pressure or hypertension.

Almost half of the participants, or 49.1 percent, had a moderate to high risk cholesterol score. This score indicates that a person may be at risk for atherosclerosis and heart disease.

Breaking down total cholesterol into HDL ("good cholesterol")

Continued on Page 3



Screenings

Continued from Page 2

and LDL ("bad cholesterol"), 53.3 percent had moderate to high risk HDL scores and 38.8 percent of the participants had moderate to high risk LDL scores.

Individuals in the moderate to high risk category for HDL have levels less than 60 mg/dl. At least 60 mg/dl of HDL is recommended so that this "good cholesterol" can carry excess LDL away from the body to be excreted.

People in the moderate to high risk category for LDL have levels of 160 mg/dl or greater. This "bad cholesterol" has a tendency to form deposits in blood vessels, contributing to hypertension and heart disease.

Only a relatively low percentage of participants (12.0 percent) had moderate to high risk triglyceride scores, while just 4.7 percent had moderate to high risk glucose scores.

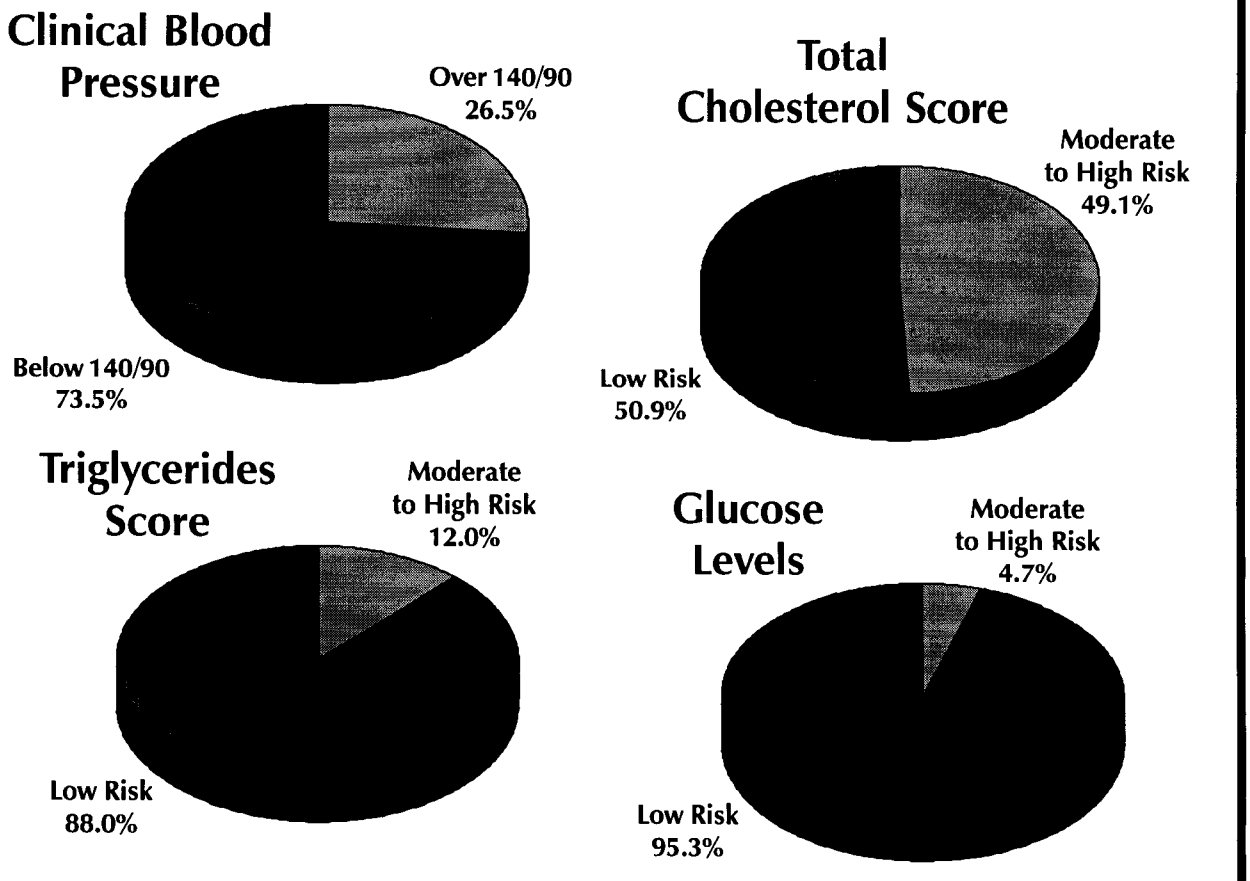
Final Assessment

Nearly half of the participants in the study need to lower total cholesterol, while 38.8 percent also need to work towards decreasing LDL levels and increasing HDL levels.

One-fourth of all participants screened should consult their physicians to monitor blood pressure to help avoid hypertension.

While only 4.7 percent had moderate to high risk glucose levels, it is important to realize that diabetes often goes undetected. These screenings allow participants with elevated levels to address the health implications of diabetes early--when diet, lifestyle changes and prescription drugs can do the most good--thus avoiding diabetic complications later on.

Sample Population: Cumulative Results of State Health Plan Preventive Screenings



Effects of group adverse selection not striking in SHP

In 1997, the State Health Plan (SHP) insured a total of 129,543 active contract-holders. The vast majority (92 percent) of these SHP participants are employees of state agencies and school districts. Without exception, these groups have participated in the program since the beginning; they remain at the *core* of the program.

Yet, as a result of state legislative action, the SHP began offering its benefits to other types of governmental organizations. These groups (and the dates they were offered SHP coverage) include: counties (1989); disabilities and special needs boards (1991); water and sewer districts (1992); natural gas authorities (1992); alcohol and drug abuse commissions (1992); municipalities (1994); councils on aging (1994) and recreation districts (1994). Other governmental groups are also eligible to participate, but have chosen other insurance arrangements.

Because the state insurance benefits program is only one insurance option for these entities, they are commonly referred to as *optional groups*. Optional groups comprise only a relatively small proportion of the SHP population (eight percent), yet it is important that their impact on the overall SHP claims experience is periodically examined. The nature of the SHP's relationship with these groups puts the plan at a clear risk of group-level *adverse selection*, the phenomenon in which, given a choice, more expensive groups tend to join the program.

The SHP establishes a single rate schedule and benefits package for all participating groups, both core and optional. Because optional groups are not required to be insured by the State, as the core group is, they can seek more advantageous arrangements with private insurers.

For a sizeable optional group with a relatively young work force and a good claims history, a private insurer would be able to quote insurance rates below the statewide rates of the SHP, which has a much more diverse group to cover.

Core, Large Optional & Small Optional Claims per Active Contract

Year	Core Group	Large Optional	Small Optional
1994	$2,429	$2,877	$2,623
1995	$2,527	$2,781	$2,273
1996	$2,794	$2,819	$2,623
1997	$2,765	$2,802	$2,645
1996-97	$2,780	$2,811	$2,634

Group-level adverse selection has proven itself to be a legitimate concern of the Plan, as higher-risk groups turn to the security that a large group like the SHP offers. Many of the entities that have been extended coverage by the State Health Plan employ fewer than 100 people, and can be hit particularly hard by soaring health costs. For such small groups, just one or two hospitalizations during a benefit period can result in higher insurance premiums the following year.

By participating in the State Health Plan, these risks are pooled into a group with over 300,000 members, thus spreading the costs over a much larger population.

Methodology

To study the effects of group-level adverse selection, the Office of Insurance Services (OIS) examined the last four SHP years: 1994, 1995, 1996 and 1997.

These statistics were calculated on a *paid* basis, meaning that claims were recorded at the time the claims were paid rather than when the services were incurred. Because there is a lag between date incurred and date paid, experience for groups in their first year of coverage is distorted to indicate lower-than-accurate claims expenditures. As a result, OIS eliminated the groups' first-year SHP experience from this analysis.

Small vs. Large Optional Groups

OIS analyzed the phenomenon of adverse selection by

Continued on Page 5

Adverse Selection

Continued from Page 4

focusing on two segments of the optional population. The optional population was divided into large groups (more than 50 employees) and small groups (50 or fewer employees), and the two groups were compared with each other and against the core group.

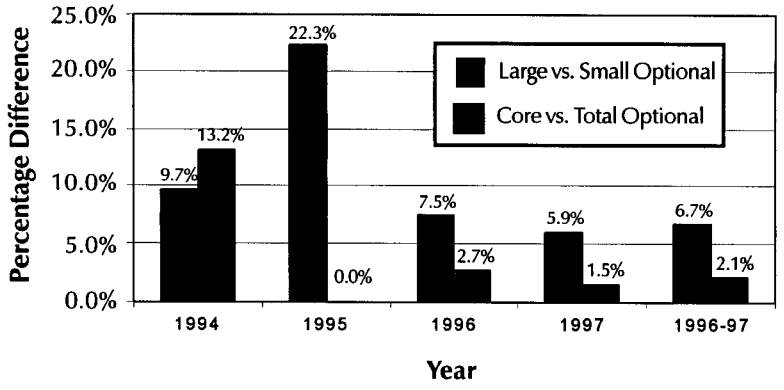
There was a material difference between the relative experience of these two segments, with expenditures on behalf of small optional group employees generally lower than those for large group membership.

In 1994, small group expenditures in the optional category equaled $2,623 per employee, 9.7 percent lower than the $2,877 of the large optional groups. In 1995, small groups averaged $2,273 in expenditures, while large groups exceeded them by a sizeable 22.3 percent, at an average of $2,781 per person. In 1996, small groups had average expenditures of $2,623, while large groups averaged $2,819, a 7.5 percent difference.

In 1994, both the large and small optional groups compared unfavorably to the core group's average expenditures of $2,429.

In 1995, 1996 and 1997, however, only the large groups averaged higher claims than the core. In 1995, the average large group claim of $2,781 was 10.1 percent higher than the core group's $2,527. In 1996 and 1997, the difference between the average large group claims and core group claims was much less significant. In 1996, the average large group claim was just 0.9 percent higher; in 1997, the average large group claim was 1.3 percent higher.

Differences between Large and Small Optional Groups; Core and Total Optional Groups: 1994-1997



Discussion

As illustrated above, small optional groups covered by the SHP tend to have better claims experience than large groups. This tendency is explained by the fact that when small groups seek insurance in the private market, they are at a distinct disadvantage in comparison to large groups in obtaining good insurance rates.

Because private insurers employ a manual rate for small groups, as opposed to an experience rating, small groups are less likely than large groups to obtain competitive insurance rates.

A manual rate is the premium rate developed for a group's coverage from the insurer's standard rate tables, usually contained in its rate manual or underwriting manual.

Experience rating is the process of determining the premium rate for a group risk based wholly or partially on that group's experience.

Insurers generally do not use experience rating for small groups because these groups' past claims experience is not reliable as a basis for predicting future claims.

Using manual rating for small groups means that these rates are based on the expected claims experience of an "average" group, neither high nor low risk. Consequently, a small group's claims history is not reflected in its insurance rates. Most likely, these rates will be higher than those the SHP offers, because the Plan establishes a single rate schedule for all participating groups, regardless of size or group history.

Therefore, with *size,* and not necessarily health, as the motivating factor leading many small optional groups to seek insurance with the SHP, it becomes more clear why their claims experience within the State Health Plan is more positive than that of large

Continued on Page 9

Small segment of population incurs largest claims

The following analysis examines the frequency distribution of the State Health Plan's (SHP) claims, or what proportion of the population incurs what percentage of claims expenditures over a one year time span.

Results indicate that the frequency distribution of SHP claims is right in line with the guiding principle of all health insurance: costs are spread among the entire population to pay for the sometimes catastrophic expenses of the very few.

When this principle is not in effect--for instance, with individual-level adverse selection (when members with low or no claims leave the plan, while the high-claim members remain)--the result can be higher claim costs to the plan, and consequently higher premiums for remaining members.

To provide a stronger analysis of SHP frequency distribution, only insured employees and dependents on active employee contracts were examined. Retirees were omitted from this analysis because of the large number for whom Medicare is the primary insurance payer.

In 1997, a total of 255,459 people (including dependents) were insured by the Plan under employee contracts. Of this group, 97,036 people (or 38.0 percent) incurred $0 in claim expenses. Conversely, 29 individuals incurred claims of more than $200,000 each during the year, with a per person average payout of $338,559 and total expenditures of $7.9 million.

Percentage of Population	Percentage of Payments
1%	38%
5%	60%
9%	76%
23%	92%
37%	98%
62%	100%

These 29 individuals comprised only 0.01 percent of the group and accounted for 2.7 percent of payments.

The most recent analysis of the SHP's frequency distribution (in 1995), showed very similar results to this year's analysis.

In 1995, 42.1 percent of the insureds incurred no claim expenses; on the other end of the spectrum, 0.009 percent of 1995 insureds incurred expenses over $200,000.

Of 1997's State Health Plan population, 1.3 percent, or 3,381 individuals, had Plan claim expenditures between $15,001 and $200,000. This group totaled $135.9 million in expenditures, at an average of $40,198 per person.

Persons with payments between $1,001 and $15,000 during 1997 equaled 48,163 (18.9 percent of all insureds). This group accounted for $186.9 million in expenditures, or 52.2 percent of total SHP payouts. These individuals incurred an average of $3,880 in claims.

The remaining 203,915 insureds in the SHP each received $1,000 or less in claims (an average of $173 per person) during 1997. This group, which comprised 79.8 percent of the total Plan population, accounted for only 9.9 percent of Plan expenditures for active employees and their dependents.

Frequency Distribution of Claims Paid to Active Insured Members: 1997

Payout Groups	*Number of Members*	*Total Payouts*	*Payout per Member*
$0	97,036	$0.00	$0.00
$1 to $500	82,465	$16,367,679.77	$198.48
$501 to $1,000	24,414	$18,919,189.37	$774.94
$1,001 to $5,000	37,284	$90,731,258.37	$2,433.53
$5,001 to $10,000	8,407	$64,143,595.28	$7,629.83
$10,001 to $50,000	5,281	$109,326,928.52	$20,702.77
$50,001 to $100,000	442	$33,838,132.36	$76,494.52
$100,001 to $200,000	102	$15,060,273.21	$148,100.43
$200,001 +	29	$9,677,756.19	$338,558.28

Life/Disability participation levels vary among entity types

The Basic Life and Basic Long Term Disability insurance products, which are available to all active, full-time employees enrolled in the state health insurance program, are both automatic, free-of-charge benefits.

Several other insurance programs available to State employees, however, do not have automatic enrollment and the employee must make a contribution. Two of these programs, Optional Life and Supplemental Long Term Disability, are the subject of this study.

To determine enrollment trends for the two programs, the Office of Insurance Services examined the levels of participation among the three eligible entity types (state agencies, school districts and local subdivisions).

January 1998 enrollment in the Basic Life program, which was 159,439, was used as a benchmark to compare total participation levels. For state agencies, Basic Life enrollment was 71,412; for school districts and local subdivisions it was 73,532 and 14,495, respectively.

Looking first at the Optional Life program, 76.5 percent of all Basic Life subscribers participated in the plan. Broken down by entity type, state agencies had the highest participation (80.6 percent), followed by local subdivisions (78.7 percent). School districts had the lowest participation, with 72.1 percent.

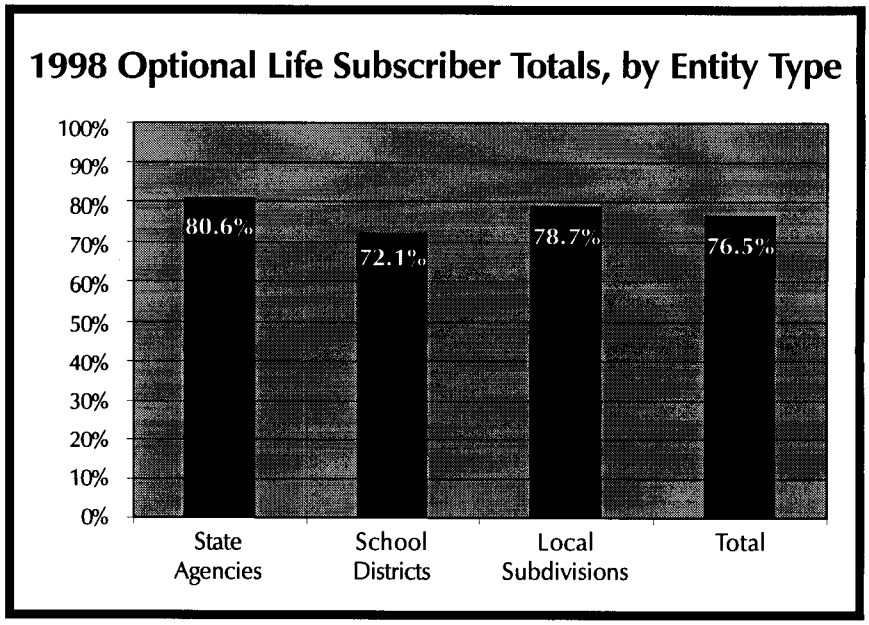
Supplemental Long Term Disability had much lower total participation, with just 33.2 percent of state insureds enrolled in the plan. Among the entity types, local subdivisions had the highest participation (45.6 percent), followed by school districts (33.0 percent). State agencies had the lowest participation, with 30.8 percent.

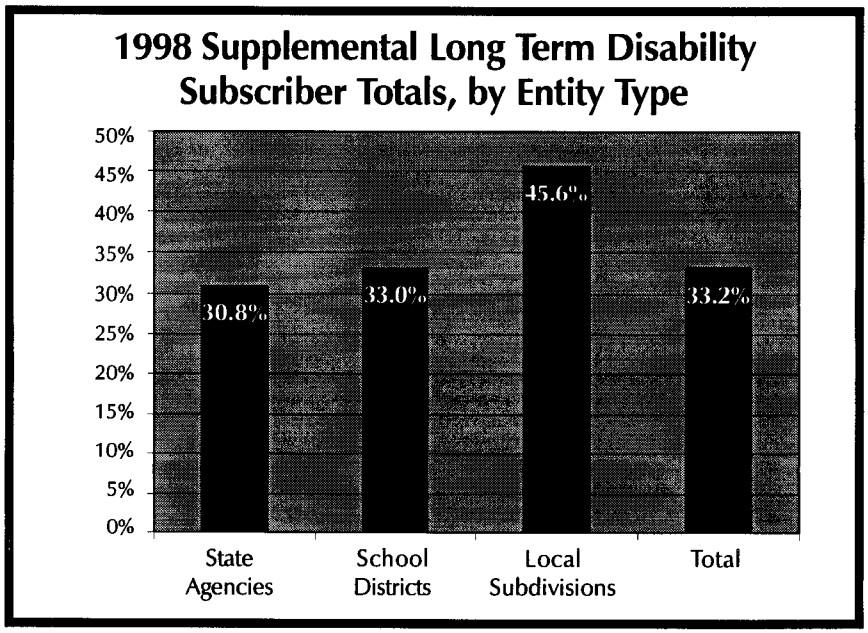
There are any number of reasons why almost twice as many people have chosen to participate in the Optional Life program than in the Supplemental Long Term Disability program. One reason might be that SLTD is a relatively new program, beginning in 1995, while Optional Life is a more established program, beginning in 1982.

Another reason might be that life insurance is more widely viewed as a necessity, whereas many people do not realize the importance of long term disability insurance.

The fact is, most people would not be able to meet their financial obligations if they became disabled and were unable to work for an extended period of time.

Therefore, so that state employees can make better-informed decisions about their benefits, it is vital that all state employees, regardless of entity type, are well-educated about the benefits the state has to offer.





Supplemental LTD protects employees unable to work

In 1995, the Office of Insurance Services (OIS) introduced the Supplemental Long Term Disability (SLTD) program, insured by the Standard Insurance Company of Portland, Oregon, to address a perceived gap in the state's benefits program.

As the basic long term disability program is limited to an $800 monthly benefit, SLTD insurance is designed to provide an extra financial cushion for eligible employees who become disabled. The benefit is based on a percentage of predisability earnings.

Eligibility for the SLTD program is the same as for the state health insurance program. The SLTD program, however, has no employer contribution--the employee pays the full premium.

The SLTD benefit is based on a percentage of a permanent, full-time employee's predisability earnings (monthly earnings as of the employee's date of enrollment). Employees can choose between two benefit elimination periods: 90 days and 180 days. The plan's maximum benefit is $6,500 per month, while the minimum benefit is $100 per month.

An employee must be disabled, eligible for benefits and not able to work because of a covered injury, physical disease, mental disorder or pregnancy in order to obtain SLTD benefits.

Employees must also satisfy the benefit waiting period and meet one of the following definitions of disability:

Own Occupation Disability: An employee is unable to perform, with reasonable continuity, the material duties of his or her own occupation during the first 24 months SLTD benefits are paid.

Any Occupation Disability: An employee is unable to perform, with reasonable continuity, the material duties of any occupation for which his education, training or experience qualify him.

Partial Disability: A) During the "own occupation" period, the employee is working while disabled and unable to earn more than 80 percent of her predisability earnings while working in her own or any other occupation. B) During the "any occupation" period, the employee is working while disabled and unable to earn more than 65 percent of her predisability earnings while working in any occupation.

Examining the claims from September 1995 through June 1998 (excluding denied and closed claims), 8.7 percent (48) were reported as an "own occupation" disability, while 91.3 percent (501) were reported as an "any occupation" disability.

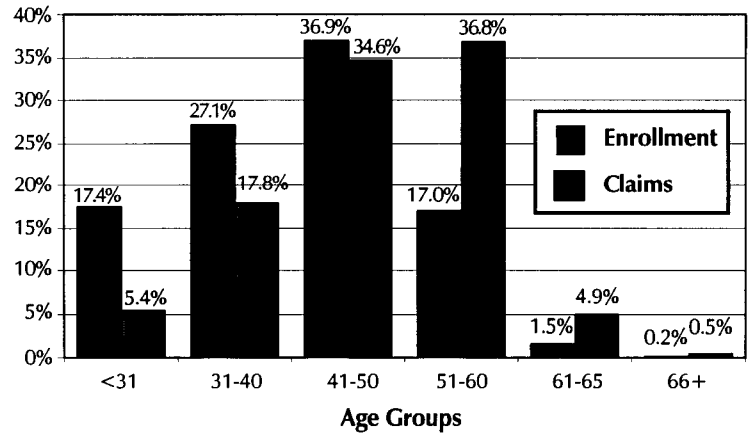
Looking now at claims from September 1995 through June 1998 (excluding denied claims) by age group, 5.4 percent were younger than age 30, 17.8 percent were between ages 31 and 40, 34.6 percent were 41-50, 36.8 percent were 51-60, 4.9 percent were 61-65 and 0.5 percent were over age 65.

SLTD claims are also categorized according to occupational code: *officials and managers, office and clerical, professional, technicians, sales, craftspeople (skilled), operatives (semi-skilled), laborers (unskilled), service workers, fire and police.* Among these, the group with the highest percentage of claims (39.0 percent) was *professional*, with 304 claims and $963,845 paid to date. The next highest group was *service workers* with 180 claims and $184,622 paid to date.

On the other end of the scale, the occupation group with the lowest number of claims was *sales* (with just one) and $1,365 paid to date, *laborers (unskilled)* with seven claims and $9,162 paid and *fire and police* with 19 claims and $36,283 paid.

Continued on Page 9

Comparison of Supplemental Long Term Disability Enrollment and Claims, by Age: 1995-1998



SLTD

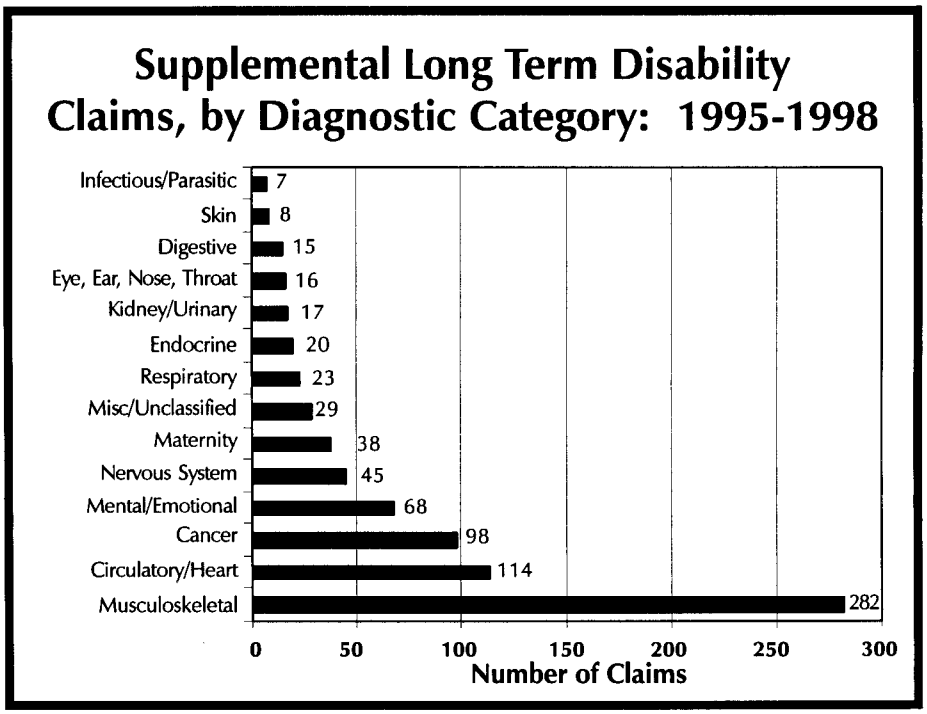
Continued from Page 8

Categorizing the claims by non-occupational illness, non-occupational accident, occupational illness and occupational accident, the vast majority of the claims (77.3 percent) fell into the non-occupational illness group.

Examining 1995-1998 claims by diagnostic category, the group with the highest number of claims (282) was *musculoskeletal*, followed by *circulatory* with 114.

The group with the third highest number of claims, with 98, was *cancer*, followed by *mental/emotional*, with 68.

The categories with the lowest number of SLTD claims reported were *infectious/parasitic* (seven claims), *skin* (eight claims) and *digestive* (15 claims).



Adverse Selection

Continued from Page 5

groups.

Large groups' rates, because private insurers base them on experience, tend to more clearly reflect their risk. When large groups have good claims histories, and consequently good rates, they fare better in the private market than they would with the SHP. Conversely, when large groups have claims experiences that indicate they are a higher insurance risk, they tend to fare better with the SHP.

Therefore, *health* is usually the motivating factor leading large optional groups to choose the SHP, and when these groups join the Plan, they bring with them the claims risk that precluded them from having viable options in the private market.

Yet, within the State Health Plan, large optional groups' negative claims experiences are largely neutralized by the vastness of the entire insured population.

Conclusion

Certainly, the Plan can be vulnerable to group-level adverse selection brought about by higher-risk optional groups electing State coverage over private coverage.

Yet while OIS analyses confirm that large optional groups have slightly higher claims experiences than the core group, the differences do not appear to be very significant.

Over the four-year period studied, payments per contract for the total optional group population equaled $2,680, just 1.9 percent more than the $2,629 for core group employees during the same time span.

Looking at 1996-1997 only, however, the optional group per capita amount of $2,723 is 2.1 percent *lower* than the $2,780 per contract for everyone else.

Consequently, while it is important for the Office of Insurance Services to periodically compare optional groups' claims experience to that of the core group, it appears that the State Health Plan has been able to effectively absorb the effects of group-level adverse selection thus far.

Past TRENDS

TRENDS is published quarterly by the State Budget and Control Board, Office of Insurance Services, P.O. Box 11661, Columbia, SC 29211.

. . . . . .

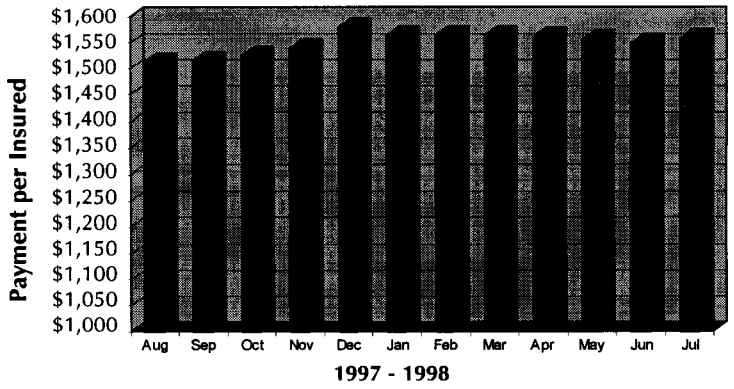
TRENDS Staff

Janet P. Scouten, Editor
Eva S. Harmon
Estela L. Long, Ph.D.
Rob Tester

Total printing cost = $315.00; Total number printed = 500; Unit cost = $0.63.

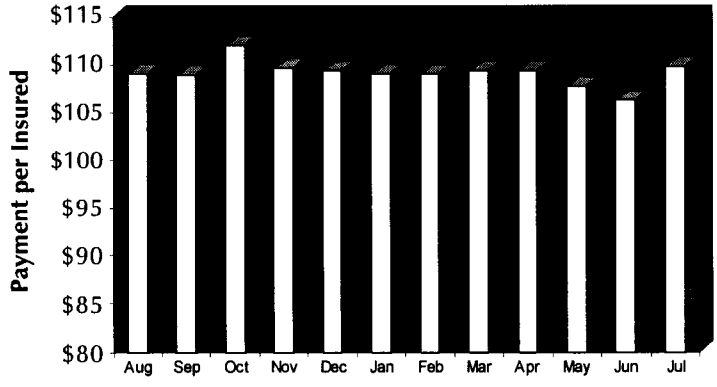
Medical Payments in Prior Year Ending in Month Listed

For example, the July total equals payments made August 1997 - July 1998.



Dental Payments in Prior Year Ending in Month Listed

For example, the July total equals payments made August 1997 - July 1998.



Office of Insurance Services
State Budget and Control Board
Post Office Box 11661
Columbia, South Carolina 29211

ADDRESS SERVICE REQUESTED